Passive mode-locking of a fiber laser operating in the regime of undumped regular spiking

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Auteur	Komarov, Andrey [1], Dmitriev, Alexander [2], Komarov, Konstantin [3], Sanchez, François [4]
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Résumé en anglais	Computer simulation is used to investigate a new regime of oscillation of fiber lasers in which passive mode-locking takes place simultaneously with the regime of regular undumped spiking induced by an intracavity saturable absorber. Such a superposition regime takes place when part of the output radiation of the laser operating in the regime of spiking is propagated through a fiber-optic delay line and is coupled back into the laser cavity in a time interval equal to the time interval between adjacent spikes. The advantages of the proposed regime of oscillation relative to other means of achieving passive mode-locking in fiber lasers are discussed. The proposed regime is of interest for obtaining reproducible high-energy light pulses.
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[4] http://okina.univ-angers.fr/francois.sanchez/publications
[5] http://okina.univ-angers.fr/publications/ua20252
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